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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,045	03/30/2001	John Gary Sousa	PTK-194	8435

21323 7590 08/26/2003

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BOSTON, MA 02110

EXAMINER
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JACKSON, CORNELIUS H

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/822,045

Applicant(s)

SOUSA ET AL.

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



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TECHNOLOGY CENTER 2800**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Acknowledgment*

1. Acknowledgment is made that applicant's Amendment, filed on 11 June 2003, has been entered. Upon entrance of the Amendment claim 1 was amended. Claims 1-8 are now pending in the present application.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Geels et al. (6307873). Geels et al. disclose a diode laser comprising a plurality of semiconductor layers including a top layer **22A** with a ridge **26**, a bottom layer **13**, and an intermediate emission layer **15**, the layers each having a refractive index associated therewith, the refractive index of the emission layer differing from the refractive indices

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of the top and bottom layers; a dopant region contained by the ridge; means for facilitating application of an electric field through the layers, wherein the ridge **26** comprises an elongated segment **10A** and a flared segment **10B** extending to the first edge **10D** and all the other stated limitations, **see Figs. 1-4, col. 3, lines 31-63, col. 5, line 3-col. 7, line 15.**

Regarding claims 3 and 4, Geels et al. disclose the elongated segment has a width that permits only a single mode of light to propagate and all the other stated limitations, **see col. 3, lines 31-63.**

Regarding claim 5, Geels et al. disclose all the stated limitations, **see Figs. 10D-E.**

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geels et al. (6307873). Geels et al., as applied to claims 1 and 3-5 above, teach all the stated limitations except for the bottom layer having a dopant material in the same identical shape as the ridge or the number of groves there are in the flared

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segment. Geels et al. does teach the grooves and its pattern may have many other configurations that are realizable to meet the objectives of this invention, **see col. 8, lines 18-55**. Therefore, it would have been a matter of design choice and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 6-8, **see rejection above**.

### ***Response to Arguments***

6. Applicant's arguments filed 11 June 2003 have been fully considered but they are not persuasive.

Applicant argued the following:

- a. The cited reference must teach each and every aspect of the claimed invention either explicitly or implicitly.
- b. Geels fails to teach "the grooves suppressing *only* multimode radiation", since Geels teaches the pumping pattern of stripes suppresses laser gain, i.e., suppresses both single mode and multimode laser radiation.
- c. Geels does not teach or suggest all the recited limitations of independent claim 1; therefore, claims 2 and 6-8 are allowable as depending from allowable base claim 1.

Examine relies to Applicant arguments are as follows:

a. The cited reference must teach each and every element of the claimed invention either explicitly or implicitly. Geels teaches each and every element of the claimed invention. In claiming Applicant invention, Applicant has failed to structurally distinguish their invention from the prior art of record.

b. Applicants assumption that Geels teaches suppressing both single mode and multimode laser radiation, since Geels teaches the pumping pattern of stripes partially pumping the laser beam is unfounded. Through partial pumping of the laser beam the laser beam is not suppressed but slightly amplified. Also the laser beam which exits from the single mode section aperture is of a single mode; therefore, no multimode laser radiation is slightly amplified or even amplified, i.e., multimode laser radiation is suppressed.

c. Applicant arguments concerning the rejection of claims 1 and 3-5 are traversed on the grounds stated above; therefore, claims 2 and 6-8 stand rejected.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



chj  
August 22, 2003

  
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